

ABSTRACT

An apparatus is provided for handling workpieces, such as semiconductor wafers, during semiconductor processing. The apparatus includes a wafer platen having a plurality of channels each extending from a top surface to a bottom surface of the wafer platen, a plurality of lift pins in alignment with the channels, and a mechanism for engaging the lift pins in a loading position of the workpiece, a clamping position of the workpiece so that desired semiconductor processes may be performed to the workpiece, and a lift off position for removing the workpiece from the wafer platen after the semiconductor processes are completed. The mechanism places the lift pins below the surface of the wafer platen in the load position and then raises the lift pins to a first predetermined distance above the surface of the wafer platen in the clamp position such that the first predetermined distance allows the workpiece to be clamped to the wafer platen. Then, the mechanism places the lift pins at a second predetermined distance above the surface of the wafer platen in the lift off position such that a workpiece removing device, such as a robotic arm, may be positioned between the workpiece and the wafer platen without contacting either surface.